

R E M A R K S

The Applicants thank the Examiner for the thorough examination of the application. Claims 1-25 are pending in the application. Claims 1 and 9 are independent. Claim 9 has been amended. Claims 1-8 are withdrawn.

Reasons for Entry of Amendments

At the outset, it is respectfully requested that this Amendment be entered into the Official File in view of the fact that the amendments to the claims automatically place the application in condition for allowance.

In the alternative, if the Examiner does not agree that this application is in condition for allowance, it is respectfully requested that this Amendment be entered for the purpose of appeal. This Amendment reduces the issues on appeal. This Amendment was not presented at an earlier date in view of the fact that Applicants did not fully appreciate the Examiner's position until the Final Office Action was reviewed.

Drawings

The Examiner is again respectfully requested to indicate whether the drawing figures are acceptable in the next Official Action.

Rejection Under 35 U.S.C. § 103

Claims 9, 17, 18, 22 and 25 stand rejected under 35 U.S.C. §103(a) as being obvious over Pei (U.S. Patent 5,682,043) in view of Wright (U.S. Patent

3,661,081). The Examiner also cites Ireton (U.S. Patent 4,611,539) to support the aforesaid rejection. This rejection is respectfully traversed.

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicants respectfully submit that independent claim 9 has been amended to recite a combination of elements in a method of patterning an electroluminescent display while printing an electroluminescent layer, including providing a substrate under the molding roller and printing minute portions of the electroluminescent material from the molding plate onto the substrate by rotating the molding roller so that the land on each convex portion contacts the substrate to thereby pattern the electroluminescent display during said step of printing. Applicants respectfully submit that this combination of elements as set forth in independent claim 9 is not disclosed or made obvious by the prior art of record, including Pei.

Pei is directed to the formation of an electrochemical light emitting device, which includes a composite material in contact with two electrodes (see Abstract of Pei). Various steps (or phases) must be completed to form the electrochemical light emitting device of Pei. The steps or phases are explained in various portions of Pei, each portion providing information relating to each phase.

In general, the phases of forming the display of Pei includes (1) finding a right mixture (see Pei, Col.6, line 40-Col.9, line 55), (2) processing the mixture into a composite layer (see Pei, Col.10, lines 23-28), and (3) adhering the composite layer between two electrodes and to a substrate so that a voltage can

be applied to the electrodes to cause illumination in the composite layer (see Pei, Col. 9 line 1 – Col.10, line 13).

A portion of Pei referenced by the Examiner (Cols. 1 and 2) is directed to obtaining the proper mixture of components. Here, a composite layer has not yet been formed. Hence, in this portion, there can be no patterning of a display during a step of printing.

Another portion of Pei referenced by the Examiner (Col. 10, lines 14-28) is directed to converting the mixture into a layer. However, no patterning and printing is disclosed in this portion of Pei either. The term “patterning” (by definition) conveys that a design or “pattern” is impressed upon an object. Contrarily, the terms plain or “uniform” convey that no design or impression is present. For example, if a surface is patterned, then it is not uniform; if a surface is uniform, then it is not patterned.

In the above-referenced portion of Pei (Col. 10, lines 14-28), it is disclosed that a mixture can be converted into a layer using established techniques such as spin coating, roll coating and flexographic printing. The Applicants submit that none of these techniques are capable of patterning an electroluminescent display during a step of printing. In fact, Pei teaches away from (or at least does contemplate) producing a pattern by these techniques. For example, Pei provides that these techniques (including a flexographic technique) are used to produce “substantially uniform layers” (see Pei, Col.10, lines 23-25). Therefore, since the goal of Pei is to produce a layer that is substantially uniform, then Pei literally teaches away from patterning.

In the Applicants' claimed invention, a display is patterned during a step of printing, and includes printing minute portions of the electroluminescent material. The minute portions correspond to pixels in a display device (for example, pixels in an array such as the array shown in Fig. 10). In a conventional method, a display (which includes the minute portions) must be patterned in a process separate from a printing process.

The attached reference materials (Exhibits A and B) are provided to illustrate some features of a flexograph as they relate to a technique thereof. For example, in a flexographic technique (see Exhibit A) the material to be printed is transferred to a paper web or a substrate passed between a plate cylinder and an impression cylinder. In other words, the paper web or substrate in Exhibit A is not provided under a molding roller.

Exhibit B is a copy of the front page of U.S. Patent No. 3,661,081 to Wright (cited by the Examiner). Like Exhibit A, this exhibit shows a relative position of the impression cylinder (3) to the substrate (paper web). Note that the relative position of the substrate (paper web) of Exhibit B is different from the position of a substrate 2 of the Applicants' claimed invention (an example of which is shown in Fig. 2). In the example shown in Fig. 2, the substrate (2) of the Applicants' claimed invention is provided under a molding roller 4. By contrast (in Exhibit B), a paper web of a flexographic technique is disposed between a plate cylinder 3 and an impression cylinder 2. Based on this distinction, it is clear that a flexograph is not suitable for carrying out the steps of the Applicants' claimed invention.

Therefore, Pei fails to teach or suggest the combination of steps recited in claim 9 (as amended), including providing a substrate under the molding roller and printing minute portions of the electroluminescent material from the molding plate onto the substrate by rotating the molding roller so that the land on each convex portion contacts the substrate to thereby pattern the electroluminescent display during said step of printing. Wright cannot supply the deficiency of Pei. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Claims 17, 18, 22 and 25 depend, either directly or indirectly from independent claim 9, which is believed to be allowable, and therefore claims 17, 18, 22 and 25 are allowable based on their dependence from claim 9. Allowance of claims 17, 18, 22 and 25 is respectfully requested.

Other Rejections under 35 U.S.C. § 103

The Examiner adds Himeshima (U.S. Patent 6,592,933) to the aforesaid rejection over Pei and Wright to reject claim 10 under 35 U.S.C. §103(a). The Examiner also rejects claims 11-16 and 20 under 35 U.S.C. §103(a) over the combination of Pei, Wright, Himeshima and Shinoda (U.S. Patent 5,674,553). The Examiner further rejects claim 19 under 35 U.S.C. §103(a) over the combination of Pei, Wright, and Mourrellone (U.S. Patent 4,542,693). The Examiner additionally rejects claim 21 under 35 U.S.C. §103(a) over the combination of Pei, Wright, Himeshima and Shinoda (as applied to claim 11) further in view of Nagayama (U.S. Patent 5,701,055) and rejected claims 23-24

over Pei and Wright in view of Watanabe. These rejections are respectfully traversed.

Pei and Wright, argued above, fail to teach or suggest the combination of elements recited in claim 9 (as amended) including providing a substrate under the molding roller and printing minute portions of the electroluminescent material from the molding plate onto a substrate by rotating the molding roller so that the land on each convex portion contacts the substrate to thereby pattern the electroluminescent display during said step of printing. Neither Himeshima, nor Mourrellone, nor Shinoda, nor Nagayama, nor Watanabe can supply the deficiencies of Pei and Wright. Claims 10, 11-16, 19, 21, 22, 23 and 24 depend, either directly or indirectly on independent claim 9, which is believed to be allowable. Therefore claim 10, 11-16, 19, 21, 22, 23 and 24 are allowable based on their dependence from independent claim 9. Allowance of claims 10, 11-16, 19, 21, 22, 23 and 24 is respectfully requested.

Conclusion

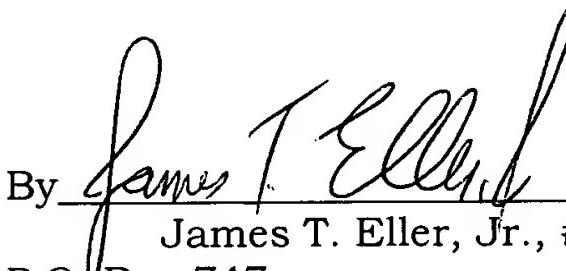
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mr. Percy L. Square (Reg. No. 51,084) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit

Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

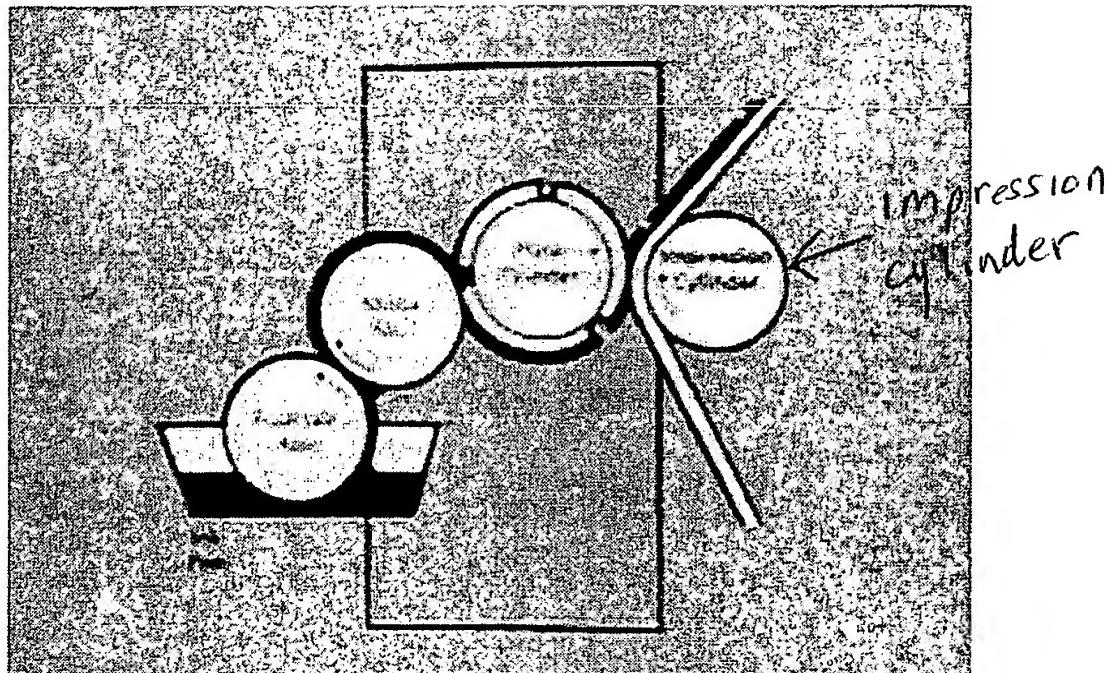
By 
James T. Eller, Jr., #39,538
P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

JTE/PLS:jls/ags

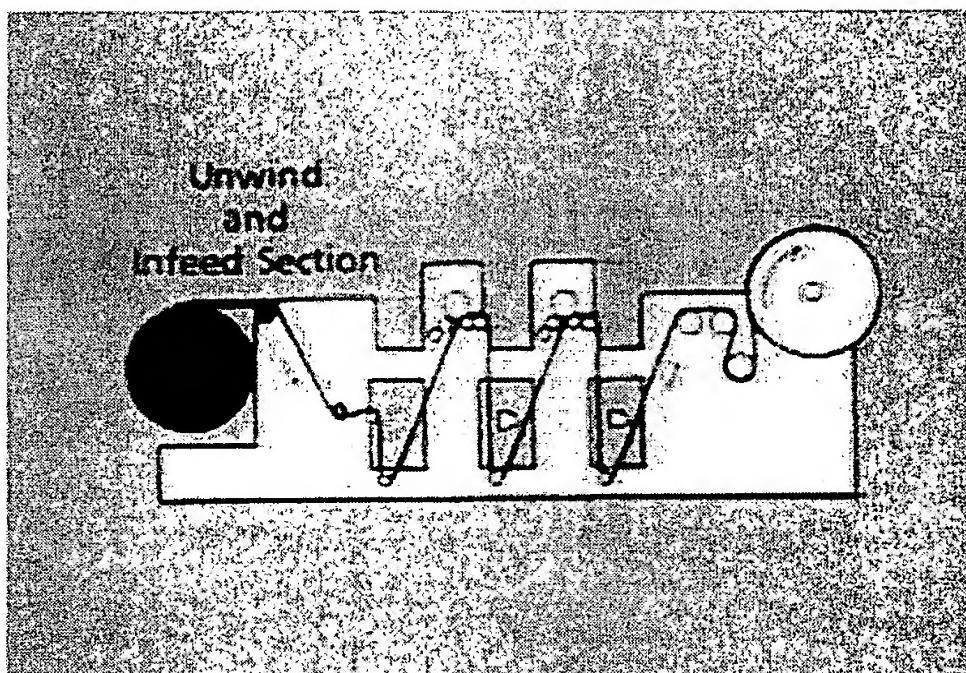
Attachment: Exhibits A and B

EXHIBIT A

The material to be printed, or **substrate**, passes between the plate cylinder and the polished metal impression cylinder. The impression cylinder backs up and supports the substrate as it contacts the printing plate. The gap, or nip, between these two cylinders must be just right to give the proper printing pressure.



Flexo presses generally have four basic sections. Since most substrates are fed into the press from rolls, or webs, the first section is called the **unwind and infeed section**. The tension of the roll must be controlled just enough to prevent slack and wrinkles as the paper unwinds into the press.



The next section is the **printing section**. One printing station has one fountain roll, anilox roll, plate cylinder, and impression cylinder. Most presses have two or more stations enabling them to print two or more colors.

